Service Bulletin SB-0015

Technical Portions FAA Approved

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

Subject: Nose and Main Landing Gear Wheel Torque

ATA-Code: 32-40

Labor: 3 Hours

Effectivity: K003-K010

Affected Model(s): E1000

Due: The next scheduled service interval.

Compliance: Mandatory

Recurrence: No

1 BACKGROUND AND PURPOSE:

It has been found that the nose and main landing gear wheels may not be adequately torqued, possibly allowing the wheel bearings to rotate.

This Service Bulletin gives instructions to inspect for indications bearing rotation and properly torque the wheels.

2 REFERENCES:

Epic E1000 Airframe Maintenance Manual, PN SK05000000
Parker Hannifin Corporation CM40-434 Component Maintenance Manual with IPL for Main Wheel Assembly P/N 40-434
Parker Hannifin Corporation CM40-423 Component Maintenance Manual with IPL for Nose Wheel Assembly P/N 40-423

3 WARRANTY:

For aircraft under warranty, parts and labor will be covered by Epic Aircraft, LLC if the work is performed within the compliance period and at an Authorized E1000 Service Center.

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

4 TOOLS:

No.	Description	Qty	Epic Aircraft Supplied	Customer Supplied
1.	Common hand tools.		☐	☒
2.	Hydraulic Aircraft Jacks, 10,000lb capacity.	3	☐	☒
3.	Lifting Pins, PN FK07100001	3	☐	☒

5 PARTS/MATERIALS:

No.	Part Number	Description	Qty	Epic Aircraft Supplied	Customer Supplied
1.	SHC 100	Grease	A/R	☐	☒
2.	-	Emery Cloth or Aluminum Oxide Sandpaper	A/R	☐	☒
3.	-	Surface Finish Comparator	1	☐	☒

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

6 INSTRUCTIONS:

A) If the Original Issue of this Service Bulletin has been complied with, no further action is required.

B) Set the BATT 1 and BATT 2 switches to OFF.

C) Remove all external electrical power to the airplane (refer to the E1000 AMM PN SK05000000, chapter 24-40).

D) Raise the airplane using aircraft jacks. Ensure there is sufficient clearance from the ground to retract and extend the landing gear (refer to the Epic E1000 Airframe Maintenance Manual, PN SK05000000, Chapter 7-10).

E) Remove the nose and main landing gear wheels (refer to the E1000 AMM PN SK05000000, chapter 32-40).

F) Inspect the nose and main landing gear axles for damage or galling caused by bearing rotation.

1) If no damage or galling is found, procced to step G.

2) If damage or galling is found, do the steps that follow (refer to Figure 1):

a) In the area of damage, using emery cloth or aluminum oxide sandpaper, remove the damage in an even radial fashion.

NOTE: In areas where material is removed, it must be blended at a ratio of no less than 20:1. (Example: If 0.001” in diameter is removed, it must be blended and removed in an area a minimum of 0.020” wide.)

b) Use a surface finish comparator to make sure the finish is Ra 32 or less.

c) Measure the diameter of the axle in all repaired areas. The minimum dimension is 1.4940”. If the minimum dimension is not met, contact Epic Aircraft for disposition.

G) Slide the main landing gear brake assemblies outboard and apply a thin layer of SHC 100 grease on the mounting surface. Put the brake assemblies back in position (refer to Figure 2).

H) Clean and grease the nose and main landing gear wheel bearings (refer to the Parker Hannifin Corporation CM40-434 Component Maintenance Manual with IPL for Main Wheel Assembly P/N 40-434 and CM40-423 Component Maintenance Manual with IPL for Nose Wheel Assembly P/N 40-423).

I) Clean the axles and apply a thin film of SHC 100, including the threads.

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

J) Install the nose landing gear wheel as follows:

1) Put the wheel into the fork with the valve stem on the left side of the airplane then install the bushings, spacers, and shims.

2) Slide the axle through the wheel and fork.

3) Install the washers and axle nut.

4) While rotating the wheel and tire, torque the nut 200 to 225 in-lbs (22.6to 25.4 N-m).

5) Loosen the axle nut until a minimal amount of preload remains.

6) Re-torque the axle nut 110 to 225 in-lbs (12.4 to 25.4 N-m) while rotating the wheel. Make sure the hole in the axle lines up with a castellation in the axle nut.

7) Install a new cotter pin.

K) Install the left and right main landing gear wheels as follows:

1) Slide the wheel assembly over the axle and line up the rotating disc on the caliper with the slots in the wheel and install the spacer and nut.

2) While rotating the wheel and tire, torque the nut 200 to 225 in-lbs (22.6to 25.4 N-m).

3) Loosen the axle nut until a minimal amount of preload remains.

4) Re-torque the axle nut 110 to 225 in-lbs (12.4 to 25.4 N-m) while rotating the wheel. Make sure the hole in the axle lines up with a castellation in the axle nut.

5) Install a new cotter pin.

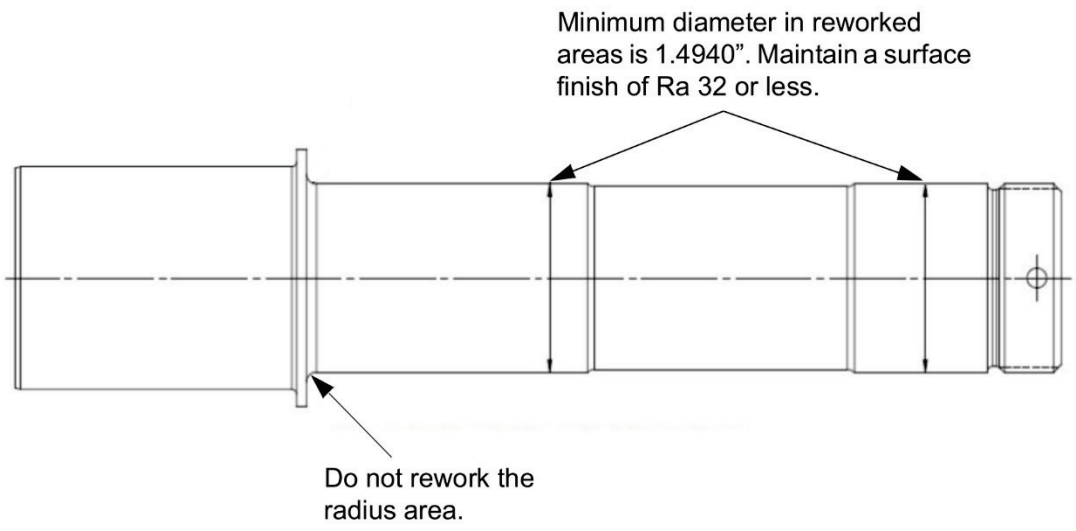
6) Repeat the procedure on the opposite side.

CAUTION: Make sure all landing gear have a green down and locked indication in the cockpit before lowering the aircraft.

L) Lower the airplane and remove the aircraft jacks (refer to the E1000 AMM PN SK05000000, chapter 7-10).

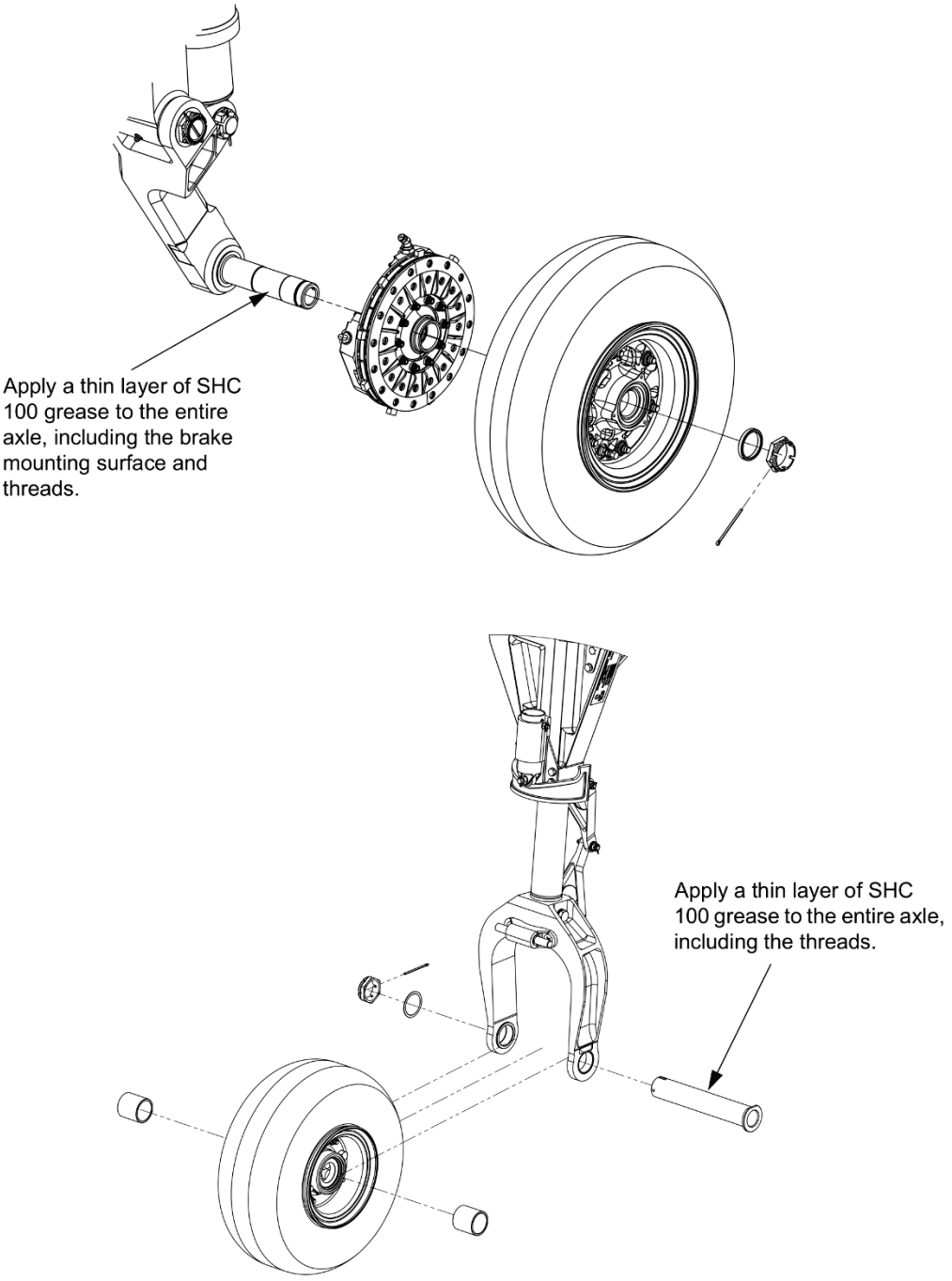
Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

Figure 1: Nose and Main Landing Gear Wheel Torque



Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

Figure 2: Nose and Main Landing Gear Wheel Torque



Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

7 WEIGHT AND BALANCE:

Negligible

8 PUBLICATIONS AFFECTED:

Epic E1000 Airframe Maintenance Manual, PN SK05000000

9 RECORD COMPLIANCE:

Make appropriate entry in airplane maintenance records.

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

Appendix A: Compliance Letter

Please complete and mail this form to Customersupport@epicaircraft.com

This is to certify that I have completed the work in accordance with the Epic Aircraft, LLC Service Bulletin.

Aircraft Owner Information:
Date: _____ Aircraft Serial Number: _____ Aircraft Reg. Number: _____ Owner's Name: _____
Maintenance Entity Information
Name of Shop Performing the work: _____ Name of Person(s) Performing inspection and/or work: _____ Phone Number: _____ Email: _____